

# Notice of Allowability

Application No.

10/810,458

Examiner

Kianni C. Kaveh

Applicant(s)

SHIE ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/25/04 and.
2. ☒ The allowed claim(s) is/are 1-5.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 10.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
K. CYRUS KIANNI  
PRIMARY PATENT EXAMINER

This application contains claims directed to the following patentably distinct species: I) claims 1-5 directed to a stack-integrated optical transceiver including conformal coated metal layer, serves multiple purposes at once; providing for electrical interconnection from the bottom of the U-shaped cavity to a wire-bonding pad on the photodetector surface and form a reflective cavity metal surface for preventing direct optical crosstalk from the light emitter to the detector and optimally reflects light from the emitter in the desired direction; said reflective cavity metal surface also provides a larger effective light emitting area and facilitates optical coupling to the connected fiber; II) claims 6-9 directed to a stack-integrated optical transceiver including the stack-integrated hybrid chip is further characterized by a specific package whereby an optically clear encapsulation of specifically shaped lens surface is provided for light transmission from and to the stack-integrated hybrid chip, such that Fresnel reflection at the encapsulation-air interface reflects light from the emitter retrospectively back toward the emitter vicinity. The species are independent or distinct because each of the above group inventions, as described above, has limitation(s) that is directed toward an invention that would require a different search than that of other group inventions and because each of the above species defining an invention that is distinct from that of the other and requiring a different search.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, none of the claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

During a telephone conversation with Mr. Coleman on 9/4/07 a provisional election was made without traverse to prosecute the invention of I, claims 1-5. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-9 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Drawings***

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. As stated by applicant in paragraph of specification, the drawing of fig. is conventional.

*New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Drawing 1-2 are Prior Art as it has been explained in the specification. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.*

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Coleman on 9/12/2007 in order to correct the scope of the independent claim and thus to avoid any 35 U.S.C. 112, second paragraph rejection and thus overcoming

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the teachings of the prior art of the record through the following amendment to the base claims so as to facilitate allowing of the case.

**Please cancel claims 6-9**

In the 4<sup>th</sup> line of claim 1 immediately after 'isolated' please delete comma [[,]]

In the 11<sup>th</sup> line of claim 1, just before 'conformal', please delete 'a' and insert the

In the 11<sup>th</sup> line of claim 1, immediately after 'conformal coated', please insert conducting

***Reason for Allowance***

Claims 1-5 are allowed for the following reasons:

The instant application is deemed to be directed to a nonobvious improvement over the invention patented in Pat. No. Doi et al. (Us 5679947).

Claim 1 is allowed because the prior art of record, taken alone or in combination, fails to disclose or render obvious the conformal coated conducting metal layer, serves multiple purposes at once; providing for electrical interconnection from the bottom of the U-shaped cavity to a wire-bonding pad on the photodetector surface and form a reflective cavity metal surface for preventing direct optical crosstalk from the light emitter to the detector and optimally reflects light from the emitter in the desired direction; said reflective cavity metal surface also provides a larger effective light emitting area and facilitates optical coupling to the connected fiber in combination with the rest of the limitations of the base claim. Claims 2-5 are allowed by virtue of dependency.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Citation of Relevant Prior Art***

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

(US-20020009258 or US-20040080011 ) or (US-5809050 or US-5679947 or US-6574398 or US-6195485 or US-5978401 )

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kianni C. Kaveh whose telephone number is 571-272-2417. The examiner can normally be reached on 9:30-19:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Cyrus Kianni  
Primary Patent Examiner  
Group Art Unit 2883

September 12, 2007

A handwritten signature in black ink, consisting of a stylized 'K' followed by a horizontal line.

K. CYRUS KIANNI  
PRIMARY PATENT EXAMINER